



Biodegradable Shrink Wrap Solutions by bioaqualife

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PLASTICS FACTS
=
PLASTIC PROBLEMS

Imagine if all 92 million pounds of Boat Shrink wrap disappeared in landfills after only a few years.

It Can – With bioaqualife biowrap

No Nano or Micro Particle Contamination

91%
of Plastics end
up in landfills

90%
of tested table salts
worldwide contain
microplastics

*The US Shrink wrap market is
expected to reach \$4.67 billion by 2033*

~ 6,183,052 registered boats in the US

46,472 tons or 92 million pounds of shrink wrap are used each year in boating applications alone which is the equivalent to 1,043,262,451 water bottles (one billion forty-three million two hundred sixty-two thousand four hundred fifty-one)

In the state of RI only **7% Of boating shrink wrap is recycled.**

11th Hour Racing Grantee, [Clean Ocean Access](#)



bioawrap usage in construction

PLASTICS BY USAGE

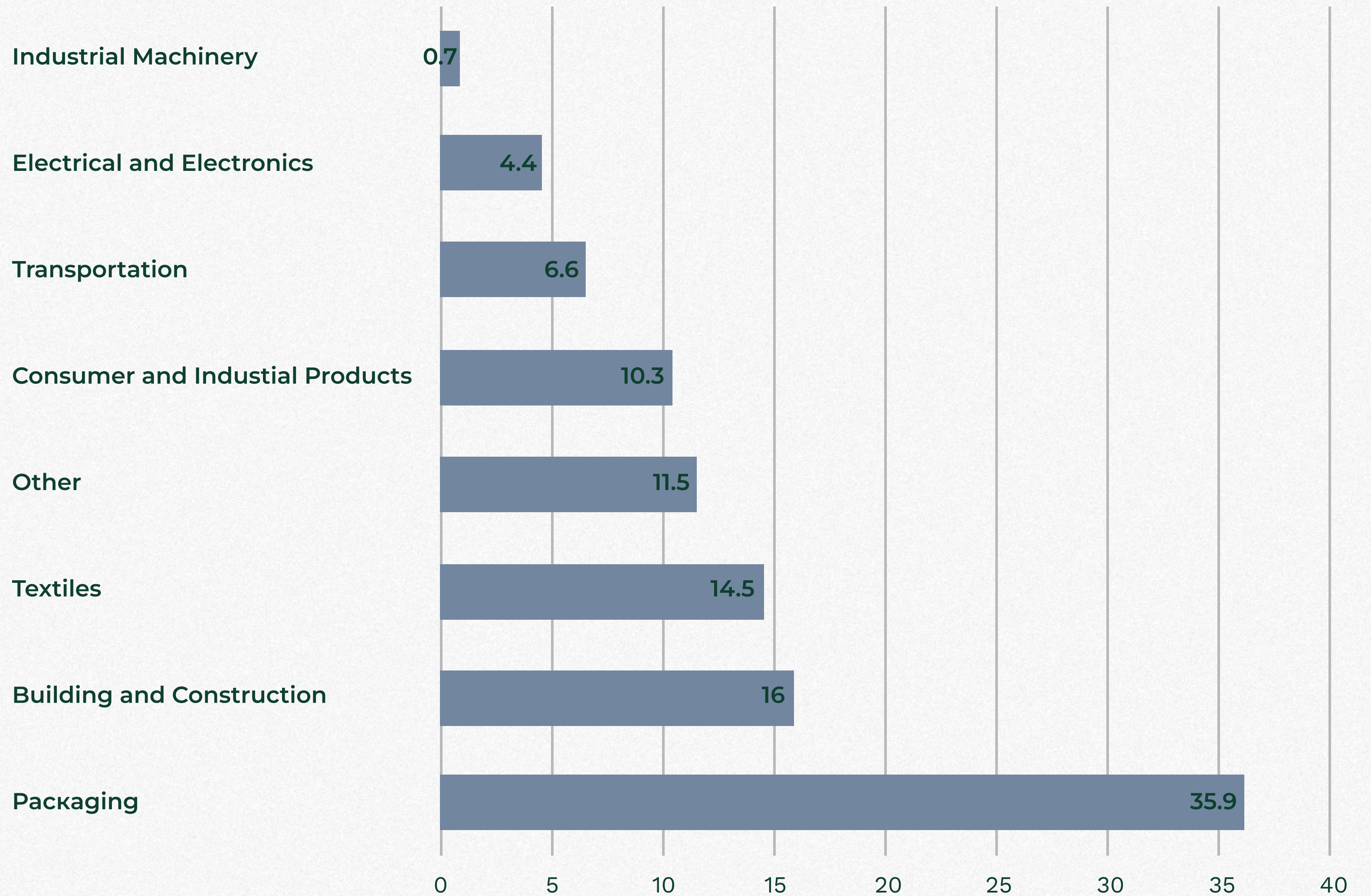


Chart: The Conversation, DD-BY-ND
Source: Science Advances (2017)

83%

of tap water found to
contain plastic particles

100 YEARS

for plastic to degrade
in the environment



**THE SOLUTION IS
BIODEGRADATION
BY BACTERIAL
CONSUMPTION**

NOT DECOMPOSITION



**92 MILLION
POUNDS**

of shrink wrap are used in
the US every year just for boats!



100,000

marine animals killed
by plastics each year

Decomposing

 breaking down into
original components

Decomposition results in nano and
microplastics.

That accumulate in the environment,
water, and animals including humans

Biodegrading

 breaking down via a biological action,
usually involving microorganisms

Bioaqualife products create a "bacterial
feast" for landfill bacteria Resulting in the
creation of soil and typical landfill gas.
No light, Oxygen or heat needed.



Bioaqualife Film will not disintegrate into micro-plastic and does not require heat, light or oxygen to biodegrade. Instead it decomposes into food for bacteria...
(unlike PLA or plastics made with oxo-biodegradable additives)

Disintegration and fragmentation are forms of degradation. Not Biodegradation! Degradation is solely plastic breaking down into micro and nano plastics.

250,000

The number of plastic nanoparticles found in ordinary water bottles

<https://people.com/nanoplastics-discovered-bottled-water-8424730>

MICROPLASTICS



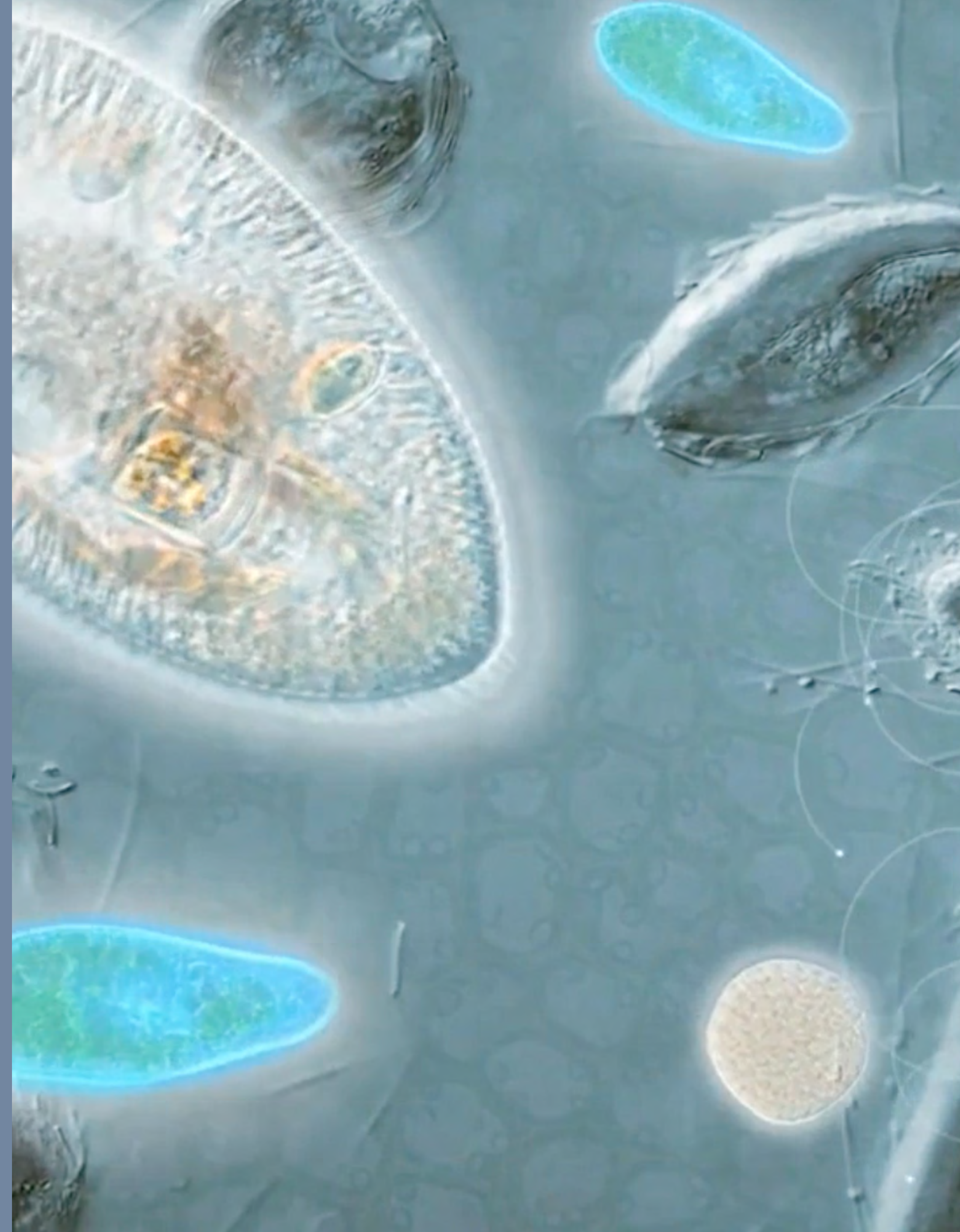


Bioaqualife's biodegradable shrink wrap films and tapes are a "digestible feast" for landfill bacteria.

True biodegradability without nano or micro particle generation and contamination. Bioaqualife shrink wrap film and tape world class performance and eco-friendliness specifications.

Set Sail, Build a New Home, or Buy a New Car that is eco-wrapped with bioaqualife.

Heal the Earth

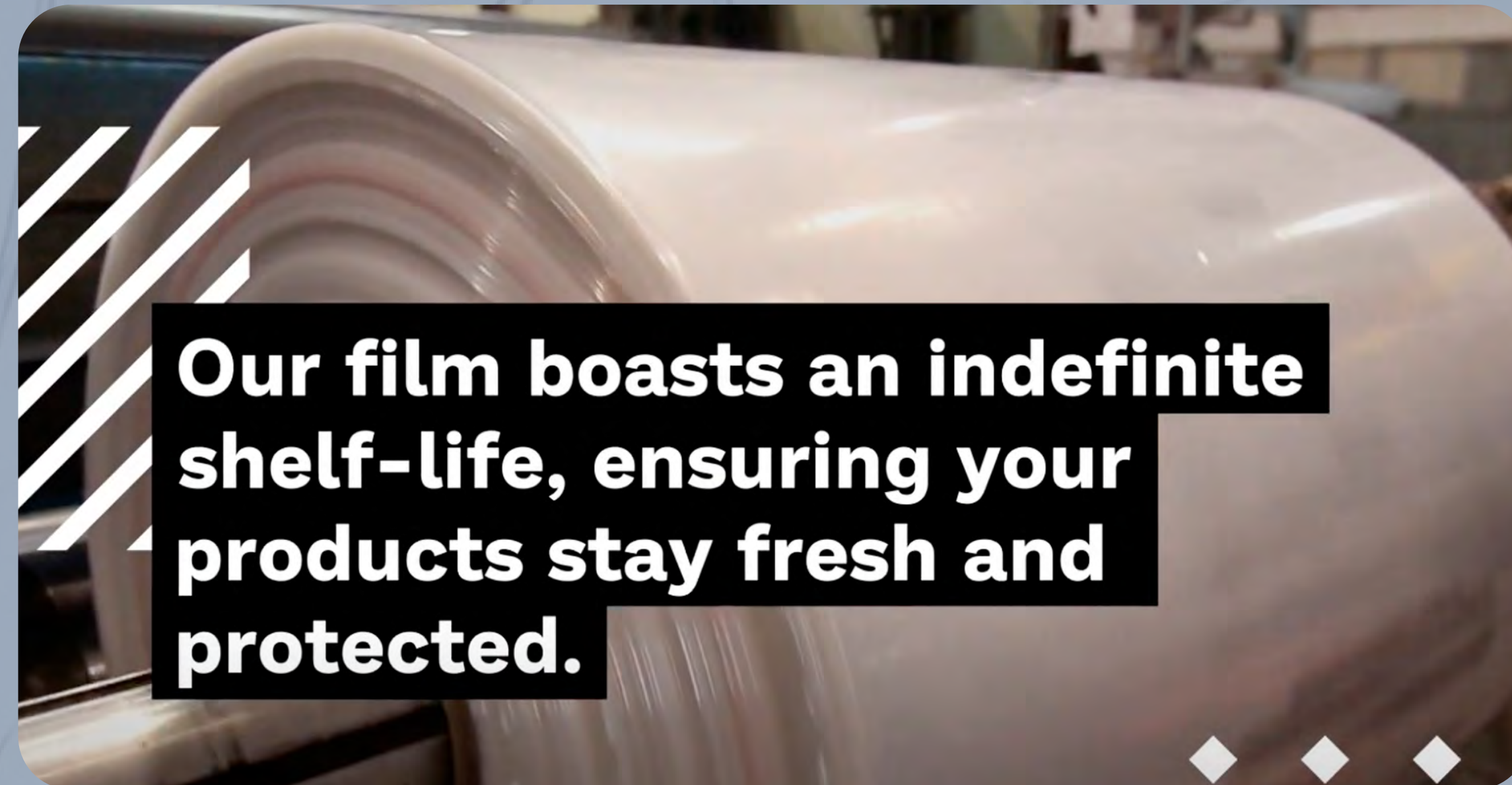




Our film is designed to biodegrade only when buried, minimizing its environmental footprint.



By adding a special monomer during the film creation process, we unlock the power of **bioaqualife.**



Our film boasts an indefinite shelf-life, ensuring your products stay fresh and protected.



BIOAQUALIFE SHRINK WRAP IS UNIQUE

Infused with a blend of organic material, these plastics are specifically designed to biodegrade under landfill conditions

- Same performance qualities as traditional Boat wrap
- Can be fully recycled
- Meets or exceeds ASTM standards



COMPARATIVE



	IMPACT	RECYCLABLE	NO TOXIC RESIDUES	SHELF LIFE	TEMPERATURE TOLERANCE	FOOD CONTACT SEFETY	BIODIGRADE IN LANDFILL
bioaqualife Film	Bio Degradable	✓	✓	Indefinite	✓	✓	see testing*
Traditional Plastic	NOT Bio Degradable of Degradable	✓	✓	Indefinite	✓	✓	500 - 1,000 Years
PLA Degradable	Application Dependent Degradable	✗	✓	Limited	✗	✓	500 + Years
OXO Degradable	Degradable	Not Sure	✗	Limited	✗	Application Dependent	500 + Years

20.8% BIODEGRADED AFTER 183 DAYS

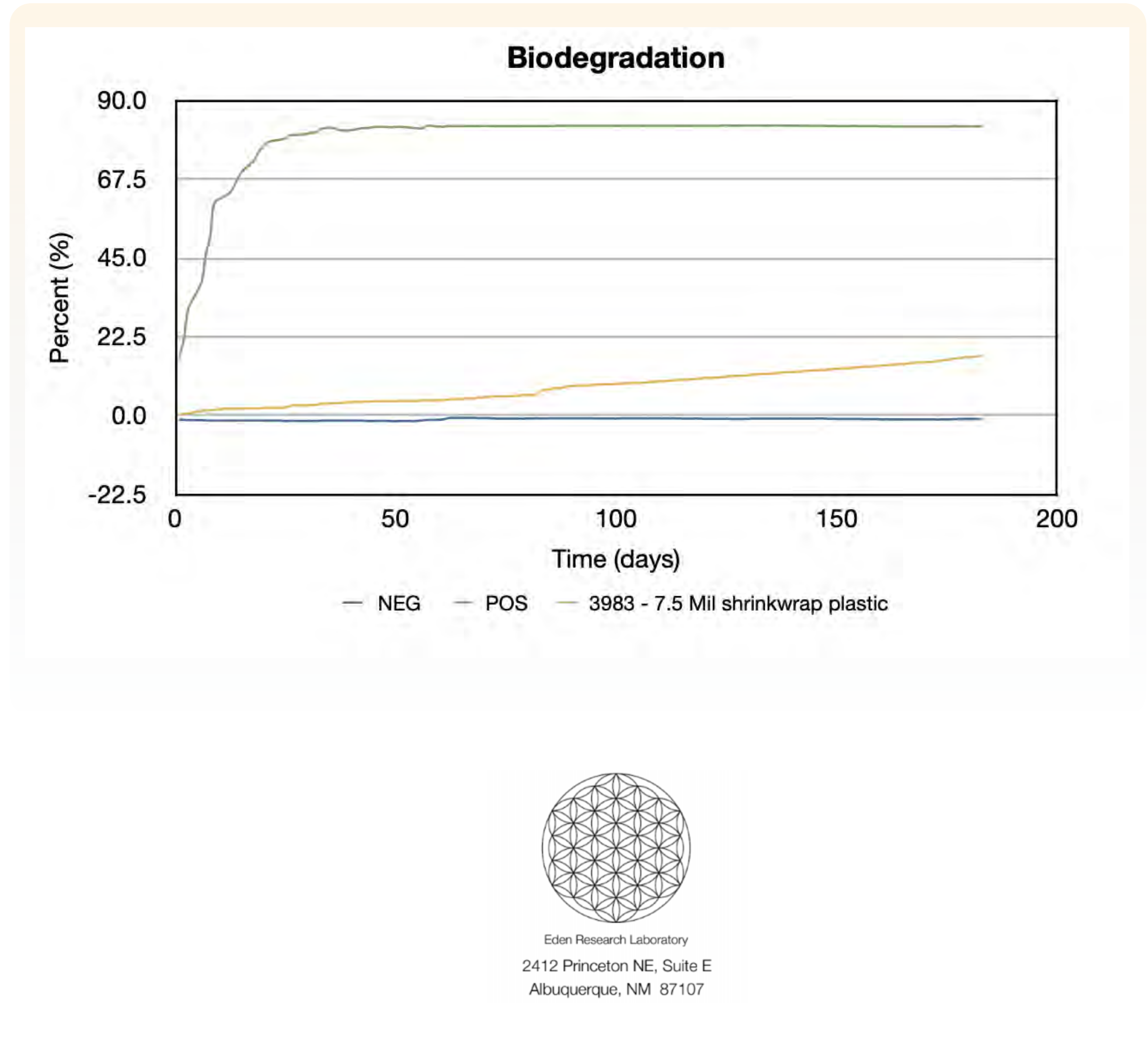
ASTM D5511 for BioAqualife film Samples in 183 days



Regarding: ASTM D5511 study update for samples - 183 days

	Inoculum	Negative	Positive	3983 - 7.5 Mil shrinkwrap plastic
Cumulative Gas Volume (mL)	2105.4	2016.0	10571.9	7730.7
Percent CH ₄ (%)	41.7	40.5	30.6	46.4
Volume CH ₄ (mL)	877.5	815.7	3235.3	3585.2
Mass CH ₄ (g)	0.63	0.58	2.31	2.56
Percent CO ₂ (%)	41.1	38.2	47.5	38.3
Volume CO ₂ (mL)	866.3	769.2	5020.6	2964.3
Mass CO ₂ (g)	1.70	1.51	9.86	5.82
Sample Mass (g)	10	10	10	20.0
Theoretical Sample Mass (g)	0.0	8.6	4.2	15.0
Biodegraded Mass (g)	0.93	0.85	4.42	3.51
Percent Biodegraded (%)		-1.0	82.7	17.2
* Adjusted Percent Biodegraded (%)		-1.2	100.0	20.8

* Outside of the ASTM D5511 method and on the assumption that the positive control (Cellulose) will fully biodegrade, all value have been proportionally adjusted.



THE SCIENCE

Organic compounds added to bioaqualife Plastic attract micro-organisms capable of processing petroleum molecules.

In a landfill or composting environment, they are consumed by the micro-organisms and converted into soil and natural gasses.

bioaqualife biowrap has an indefinite shelf life (it will not begin to break down until it is disposed of in a landfill).

Products made by bioaqualife OUT-PERFORM regular plastics at the same mil thickness with better elongation and puncture resistance.



BIOAQUALIFE FILM STANDARDS

bioaqualife Film has been tested to biodegrade according to the following standards:

ASTM D5511 - Standard Test Method for Determining Anaerobic Biodegradation of Plastic Materials Under High-Solids Anaerobic-Digestion Conditions (20.8% biodegradation in 183 days under anaerobic (landfill) conditions. Actual rate of biodegradation will vary dependent upon specific environmental conditions.)

bioaqualife Film complies with the requirements of the following rules and specifications:

US Federal Trade Commission (US FTC) 16 CFR Part 260 section 260.8 -

(GUIDES FOR THE USE OF ENVIRONMENTAL MARKETING CLAIMS)

ISO 15985:2014 Plastics - Determination of the ultimate anaerobic biodegradation under high-solids anaerobic-digestion conditions (ISO 15985 testing is equivalent to ASTM D5511 testing)

VIDEO PRESENTATION



Please Click Above Image to View Video Presentation



CONTACT US TODAY.

**SAVING THE PLANET –
ONE WRAP AT A TIME**

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* LLDPE/LDPE Product 20.8% Biodegraded in 183 days under landfill conditions.

